

### **REMARKS/ARGUMENTS**

This paper is submitted in response to the Office Action mailed July 19, 2005. In the Office Action, claims 1-4, 8, 12, and 13 were rejected under 35 U.S.C. §102(b) as being anticipated by United States Patent No. 4,584,704 to Ferren (hereinafter "Ferren"). Claims 9-11, 14-16, and 19-23 were rejected under 35 U.S.C. §103(a) as being obvious over Ferren. Claims 5-7, 17, 18, and 24-32 were rejected under 35 U.S.C. §103(a) as being obvious over Ferren in view of United States Patent No. 5,936,664 to Fraering, Jr. et al. (hereinafter "Fraering").

By this paper, claims 1, 14, and 24 have been amended. In view of these amendments and the following remarks, immediate allowance of claims 1-32 is respectfully requested.

#### **Rejection of Claims 1-4, 8, 12, and 13 under 35 U.S.C. §102(b) by Ferren**

In the Office Action, the Examiner rejected claims 1-4, 8, 12, and 13 under 35 U.S.C. §102(b) as being anticipated by Ferren. Applicants respectfully traverse this rejection. "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." MPEP § 2131 (*quoting Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987)). "The identical invention must be shown in as complete detail as is contained in the . . . claim." *Id.* (*quoting Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989)). In addition, "the reference must be enabling and describe the applicant's claimed invention sufficiently to have placed it in possession of a person of ordinary skill in the field of the invention." *In re Paulsen*, 30 F.3d 1475, 1479, 31 USPQ2d 1671, 1673 (Fed. Cir. 1994).

In the Office Action on page 2, the Examiner asserted that "Ferren discloses an imaging system comprising: ... the f-stop number and the predetermined pixel size are jointly selected to create a range of depth of field of 0.9m-2.43m, (see fig. 8) where objects (81, 83) at a distance of 3 feet (0.9m) - 8 feet (2.43m) are in focus, and thus, the lens (12) is a wide angle lens." This description of the disclosure of Ferren is incorrect. As will be discussed below, Ferren does not disclose each and every element of claims 1-4, 8, 12, and 13.

First, the objects (81, 83) at a distance of 3 feet and 8 feet, respectively, are not in focus at any one time. Instead, Ferren discloses that "As illustrated in this figure[, Fig. 8,] of the

drawings, the present invention effectively produces "pictures" of a field of view at successive ranges so that three-dimensional vision is provided." Ferren, col. 8, lines 37-42. Ferren further discloses that "The variable focus lens 87 scanned the visual scene in about two seconds and each focal plane was scanned at conventional video scanning rates, e.g. about thirty frames (memory planes) per second or about sixty frames for a single scan of the entire field." Ferren, col. 7, lines 9-12. In other words, sixty different focal planes are scanned over a distance of 5 feet, so that each plane is about two inches wide. See Ferren, col. 5, lines 26-33. Consequently, the Examiner's statement that "objects (81, 83) at a distance of 3 feet (0.9m) - 8 feet (2.43m) are in focus" is incorrect. Thus, Ferren does not disclose a range of depth of field of 0.9m-2.43m.

Second, Ferren does not disclose a wide angle lens and Applicants have been unable to locate any disclosure of a wide angle lens within the disclosure of Ferren. Instead, Ferren discloses that the lens (12) is a "variable focus lens 87." Additionally, the Examiner's statement that "objects (81, 83) at a distance of 3 feet (0.9m) - 8 feet (2.43m) are in focus" is not relevant to whether the lens (12) is or is not a wide angle lens. Specifically, Merriam-Webster's Collegiate Dictionary, 11<sup>th</sup> Ed., defines "wide-angle" as "having or covering an angle of view wider than the ordinary -- used especially of lenses of shorter than normal focal length." Consequently, the Examiner's assertion that "the lens (12) is a wide angle lens" is incorrect. Therefore, Ferren does not disclose this element of claims 1-4, 8, 12, and 13.

Third, the Examiner's assertion that Ferren discloses an "f-stop number and the predetermined pixel size are jointly selected to create a range of depth of field of 0.9m-2.43m" is also unsupported and incorrect. Specifically, Ferren does not disclose a predetermined pixel size. Instead, Ferren discusses a vidicon camera. Vidicon cameras do not include pixels. Instead, Vidicon cameras use an electron beam to scan an image line-by-line that has been captured by a photoconductive layer on a glass faceplate. In passing, Ferren also discloses that rectangular CCD arrays may be used, but does not disclose that an "f-stop number and the pixel size [are] jointly selected to create a rear depth of field in the range from about 0.1m to about 3m." In fact, Ferren does not disclose any type of relationship between an f-stop number and the related depth of field or the creation of a rear depth of field. Thus, Ferren does not disclose this claim language.

Claims 1-4, 8, 12, and 13 have been amended to provide for “a wide angle lens ... having a fixed focal length.” In contrast, Ferren discloses that the lens (87) is a “variable focus lens 87” which is important to the operation of Ferren because Ferren operates by “effectively produc[ing] “pictures” of a field of view at successive ranges so that three-dimensional vision is provided.” Ferren, col. 8, lines 37-42. Consequently, Ferren does not disclose this element of claims 1-4, 8, 12, and 13.

Therefore, Ferren does not disclose each and every element of claims 1-4, 8, 12, and 13. Consequently, Ferren does not anticipate claims 1-4, 8, 12, and 13. Withdrawal of this rejection is respectfully requested.

Rejection of Claims 9-11, 14-16, and 19-23 under 35 U.S.C. §103(a) by Ferren

In the Office Action, the Examiner rejected claims 9-11, 14-16, and 19-23 under 35 U.S.C. §103(a) as being unpatentable over Ferren. Applicants respectfully traverse this rejection and assert that the Examiner has not established the *prima facie* obviousness of claims 9-11, 14-16, and 19-23. Specifically, MPEP §2143 provides that a *prima facie* case of obviousness is established only if the Examiner shows that (1) there is some teaching, suggestion, or motivation, either in the reference itself or in the knowledge generally available to one of ordinary skill in the art, to modify the reference; (2) there is a reasonable expectation of success; and (3) the prior art teaches or suggests all of the claim elements.

As discussed above, Ferren does not disclose the elements of claims 9-11, 14-16, and 19-23 that provide for “a wide angle lens ... having a fixed focal length [and] the f-stop number and the pixel size jointly selected to create a rear depth of field in the range from about 0.1m to about 3m.” Therefore, Ferren does not teach or suggest all elements of claims 9-11, 14-16, and 19-23. Therefore, the *prima facie* obviousness of claims 9-11, 14-16, and 19-23 has not been established and claims 9-11, 14-16, and 19-23 are patentable over Ferren. Thus, withdrawal of this rejection is respectfully requested.

Rejection of Claims 5-7, 17, 18, and 24-32 under 35 U.S.C. §103(a) by Ferren & Fraering

The Examiner rejected claims 5-7, 17, 18, and 24-32 under 35 U.S.C. §103(a) as being obvious over Ferren in view of Fraering. Applicants respectfully traverse this rejection and assert that the Examiner has not established the *prima facie* obviousness of claims 5-7, 17, 18, and 24-32.

As discussed above, Ferren does not disclose the elements of claims 5-7, 17, 18, and 24-32 that provide for “a wide angle lens ... having a fixed focal length [and] the f-stop number and the pixel size jointly selected to create a rear depth of field in the range from about 0.1m to about 3m.” Similarly, Fraering does not disclose “the f-stop number and the pixel size jointly selected to create a rear depth of field in the range from about 0.1m to about 3m” as provided in claims 5-7, 17, 18, and 24-32. In fact, nowhere in Fraering is a pixel disclosed. Consequently, Ferren and Fraering, singly or in combination, do not teach or suggest each and every element of claims 5-7, 17, 18, and 24-32.

Additionally, there is no motivation to combine Ferren with Fraering. MPEP §2143.01(IV) states that “The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination.” See *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). In the Office Action, the Examiner merely suggested that the motivation to combine is “to provide an optimum viewing range.” However, this statement fails to provide the desirability of the combination. Specifically, why is a wide angle lens more desirable than the variable focus lens 87 of Ferren? Also, how does modifying Ferren to include a wide angle lens provide an optimum viewing range?

In the Office Action on page 4, the Examiner also asserted that Ferren may be modified by Fraering “to provide a better imaging field of the imaging system.” How? Why does modifying Ferren with Fraering provide a better imaging field? The Examiner’s statements do not suggest the desirability of the combination.

Furthermore, MPEP §2143.01(VI) states that “If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima*

*facie* obvious.” See *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959). In this case, Ferren teaches that “The focal plane of this lens or imaging system is periodically swept through a near to far range, or vice versa, by a focus sweep servo 13 so that different thin planes of the field of vision or object space will be in focus at successive time intervals during the sweep cycle.” Ferren, col. 3, lines 47-52. In other words, Ferren operates by “effectively produc[ing] “pictures” of a field of view at successive ranges so that three-dimensional vision is provided.” Ferren, col. 8, lines 37-42.

In contrast, the wide angle lens of Fraering provides “a good peripheral viewing of an axial band ... of the tubular.” Fraering, col. 1, lines 56-57. Specifically, the wide angle lens of Fraering is not used to sweep the focal plane and does not appear to be capable of sweeping the focal plane. Thus, to replace the variable lens of Ferren with the wide angle lens of Fraering would be change the principle of operation of Ferren.

Additionally, MPEP §2143.01(V) states that “If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification.” See *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). In this case, the replacement of the variable lens of Ferren with the wide angle lens of Fraering would also render Ferren unsatisfactory for its intended purpose of producing a three dimensional image by sweeping the focal plane. Consequently, Applicant’s respectfully assert that the Examiner has failed to provide a motivation to modify Ferren with Fraering.

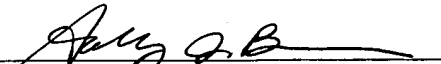
In conclusion, Ferren and Fraering fail to teach all the elements of claims 5-7, 17, 18, and 24-32. Additionally, the Examiner has failed to provide a motivation to combine Ferren with Fraering. Therefore, the *prima facie* obviousness of claims 5-7, 17, 18, and 24-32 has not been established. Consequently, withdrawal of this rejection is respectfully requested.

Appl. No. 10/643,812  
Amdt. dated November 21, 2005  
Reply to Office Action of July 19, 2005

Conclusion

Applicant respectfully requests that a timely Notice of Allowance be issued in this case.  
If there are any remaining issues preventing allowance of the pending claims that may be clarified by telephone, the Examiner is requested to call the undersigned.

Respectfully submitted,

  
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